

Full-Wave Mercury-Vapor Rectifier

For DC Power Supplies Having Large Current Requirements

GENERAL DATA

Electrical:

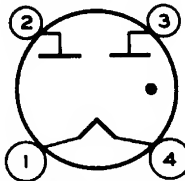
Filament, Coated:

Voltage (AC or DC) 5.0 volts
Current 3.000 amp

Mechanical:

Operating Position Vertical, base down
Maximum Overall Length 5-3/8"
Maximum Seated Length 4-3/4"
Maximum Diameter 2-1/16"
Bulb ST-16
Base Medium 4-Pin
Basing Designation for BOTTOM VIEW 4C

Pin 1—Filament
Pin 2—Plate of
Unit No.2



Pin 3—Plate of
Unit No.1
Pin 4—Filament

FULL-WAVE RECTIFIER

Maximum and Minimum Ratings:

PEAK INVERSE VOLTAGE 1550 max. volts
PEAK PLATE CURRENT PER PLATE 1 max. amp
CONDENSED MERCURY TEMPERATURE RANGE 20 - 60 °C

With Capacitor-Input Filter

AC PLATE VOLTAGE PER PLATE (RMS) 450 max. volts
TOTAL EFFECTIVE PLATE-SUPPLY IMPEDANCE
PER PLATE^a 50 min. ohms
DC OUTPUT CURRENT 225 max. ma

With Choke-Input Filter

AC PLATE VOLTAGE PER PLATE (RMS) 550 max. volts
INPUT-CHOKE INDUCTANCE 3 min. henries
DC OUTPUT CURRENT 225 max. ma

Characteristics:

Tube Voltage Drop (Approx.) 15 volts

^a When a filter-input capacitor larger than 40 μ f is used, it may be necessary to use more plate-supply impedance than the minimum value shown to limit the peak plate current to the rated value.



HALF-WAVE RECTIFIER

As a half-wave rectifier, the 83 is operated with plates connected in parallel. Two 83's so connected in a full-wave circuit can supply twice the output current of a single tube. Both plates within the same tube should be connected to the same terminal of the plate transformer. To equalize the current distribution between plates, a resistor of not less than 50 ohms should be connected in series with each plate.

